

## REMARKS

Claims 1-4 and 6 stand rejected under 35 U.S.C. §103 as being unpatentable over United States Patent No. 3,011,525 to Randle et al. (hereinafter “Randle”) in view of United States Patent No. 5,660,210 to Ikeda et al. (hereinafter “Ikeda”). Claims 5 and 7 stand rejected under 35 U.S.C. §103 as being unpatentable over Randle et al. in view of Ikeda and further in view of United States Patent No. 5,371,153 to Kurabayashi et al. Applicant respectfully traverses these rejections.

As discussed in more detail below, Applicant respectfully traverses the rejections because: (I) Applicant has now provided the necessary evidence, in the form of a Declaration, to support Applicant’s previous argument that, when properly converted, the intermediate elongation of Ikeda would be 0.6 ± 0.2 % at a load of 0.85 cN/dtex, which is much lower than the claimed value of 2.2 to 5%; (II) The Ikeda reference teaches away from making a hose with an intermediate elongation of more than 0.82% at a load of 0.85 cN/dtex; and (III) The combination of the cited references fails to produce the unexpected results of the claimed configuration related to the durability of the hose and reduced vibration of the twisted cords of a power steering hose, including specific parameters for the intermediate elongation, the elongation at break and the number of twists, which configuration of new Claim 8 is of commensurate scope with the evidence of Table 1 of the Specification.

(I) In the Decision on Appeal, the Board indicated that it did not find one of Applicant’s arguments persuasive because: (a) the argument was not supported by sufficient evidence, such as an expert declaration; (b) Applicant’s argument relied upon an assumption,

without providing the basis for the assumption; and (c) Applicant did not provide a basis for comparing the individual threads of Ikeda with the twisted cords of Claim 1. *See* Decision on Appeal, page 7, lines 5-17. Briefly, the argument requiring additional evidence of (a)-(c) was made on page 4 of Applicant's Reply Brief, and related to converting Ikeda's intermediate elongation of  $2.7 \pm 1.0\%$  at a load of 3 g/d to an intermediate elongation at the claimed load of 0.85cN/dtex, and asserting that when converted to the same load and units, the intermediate elongation of Ikeda would be  $0.6 \pm 0.2\%$  at a load of 0.85 cN/dtex, which is much lower than the claimed value of 2.2 to 5%. The argument also continued with the assertion that the Ikeda's intermediate elongation value of  $0.6 \pm 0.2\%$  is so low that it can never be possible to obtain the vibration-preventive result or the high durability attainable by the power steering hose of Claim 1, which includes the claimed value of 2.2 to 5%.

Enclosed is a Declaration Under 37 C.F.R. §1.132, signed by the inventor, that addresses all three issues ((a)-(c)) raised by the Board. More specifically, Applicant submits that the enclosed Declaration provides the necessary evidence to support Applicant's argument that, when properly converted, the intermediate elongation of Ikeda would be  $0.6 \pm 0.2\%$  at a load of 0.85 cN/dtex, which is much lower than the claimed value of 2.2 to 5%.

First, with regard to issue (a), Paragraph 1 of the Declaration states that the inventor that signed the Declaration has been employed by the Yokohama Rubber Company for nearly seventeen (17) years, and that he has been engaged in research and development for more than twelve and a half (12½) years, mainly in the field of reinforcing fibers for hoses. Paragraph 1 of the declaration also states that the inventor graduated from the Master

Course in the Division of Applied Chemistry. Thus, based on this education and experience, Applicant respectfully submits that the Declaration should be treated as an expert declaration.

Second, with regard to issue (b), in the Declaration, page 4 (line 5) through page 6 (line 19) discusses how it is appropriate to convert the load and units used in the Ikeda reference (3 g/d) to the load and units used in Claim 1 (0.85 cN/dtex) by assuming that the S-S curve of the fiber is linear. Paragraphs 6 and 7 of the Declaration discuss the basis for the assumption that the S-S curve is linear. Accordingly, Applicant respectfully submits that the Declaration provides the necessary basis for the assumption used in converting the intermediate elongation of Ikeda into the units and load of Claim 1, to thereby arrive at  $0.6 \pm 0.2\%$  at a load of 0.85 cN/dtex.

Third, with regard to issue (c), paragraph 8 of the Declaration discusses why it is appropriate to compare the single fiber elongation of Ikeda with the twisted fiber elongation of Claim 1.

Accordingly, in light of the evidence provided in the expert Declaration, Applicant respectfully requests that the Examiner re-consider Applicant's argument that one of ordinary skill in the art would not have had a reasonable expectation of success in achieving the claimed power steering hose because the intermediate elongation of Ikeda's reinforcing cord is so small or low that it can never be possible to obtain the vibration-preventive result or the high durability attainable according to the hose of Claim 1, such as discussed on pages 4 and 5 of Appellant's Reply Brief and pages 6 and 7 of Appellant's Brief. In other words, Applicant respectfully submits that the expert Declaration provides the

necessary evidence to support Applicant's argument that one of ordinary skill in the art would not have arrived at the power steering hose of Claim 1 that includes, *inter alia*, twisted cords having an intermediate elongation at 0.85cN/dtex of 2.2 to 5% by considering the cited references, which include Ikeda, which, when properly converted, discloses *a much lower* intermediate elongation of  $0.6 \pm 0.2 \%$  at a load of 0.85 cN/dtex.

(II) In addition to the arguments made above, Applicants also traverses the §103 rejection of Claim 1 because the Ikeda reference teaches away from using twisted cored having an intermediate elongation at 0.85cN/dtex of greater than about 0.82% (when properly converted from the disclosed intermediate elongation of 3.7% under a 3 g load). As mentioned above, Claim 1 recites, *inter alia*, twisted cords having an intermediate elongation at 0.85cN/dtex of 2.2 to 5%. However, the Ikeda reference (col. 2, lines 60-63) teaches away from values of more than 0.82%. More specifically, in col. 2, lines 60-63, of the Ikeda reference, it teaches away from using values of greater than 3.7% at 3g because the volume expansion becomes too large. When properly converted to a load of 0.85cN/dtex using the same conversion method relied upon earlier, this value converts to an intermediate elongation at 0.85cN/dtex of about 0.82%. Thus, because the Ikeda reference teaches away from elongation values greater than about 0.82% (at 0.85cN/dtex), Applicant respectfully submits that it would not have been obvious to have arrived at the claimed elongation value of between 2.2% to 5.0%. Accordingly, for this reason also, Applicant respectfully requests the withdrawal of the §103 rejections of independent Claim 1 and associated dependent Claims

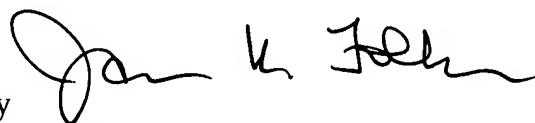
(III) Finally, in the Response filed February 11, 20078, Applicant added new dependent Claim 8, which recites that the elongation at break of the twisted cords ranges from 15.9 to 18.5%. In the Reply Brief (pages 5-6), Applicant argued that the claimed configuration of the twisted cords of a power steering hose, including specific parameters for the intermediate elongation, the elongation at break and the number of twists, produced unexpected results related to the durability of the hose and reduced vibration. In the Decision on Appeal (page 8), the Board indicated that evidence of unexpected results needed to be commensurate in scope with the claims, while referring to the difference between the claimed range of 8 – 19% and the range in Table 1 of 15.9 -18.5% and the difference between the claimed range of the number of twists of 15-30/10cm and the value of 20/10cm found in Table 1. Accordingly, Applicant has added Claim 8, which includes values commensurate in scope with Table 1. Therefore, Applicant respectfully requests the allowance of dependent Claim 8 because Applicant was able to obtain the unexpected results shown in Table 1.

For all of the above reasons, Applicants request reconsideration and allowance of the claimed invention. The Examiner is invited to contact the undersigned attorney if an interview would expedite prosecution.

Respectfully submitted,

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